

CLINICAL MEDICINE

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Original Articles

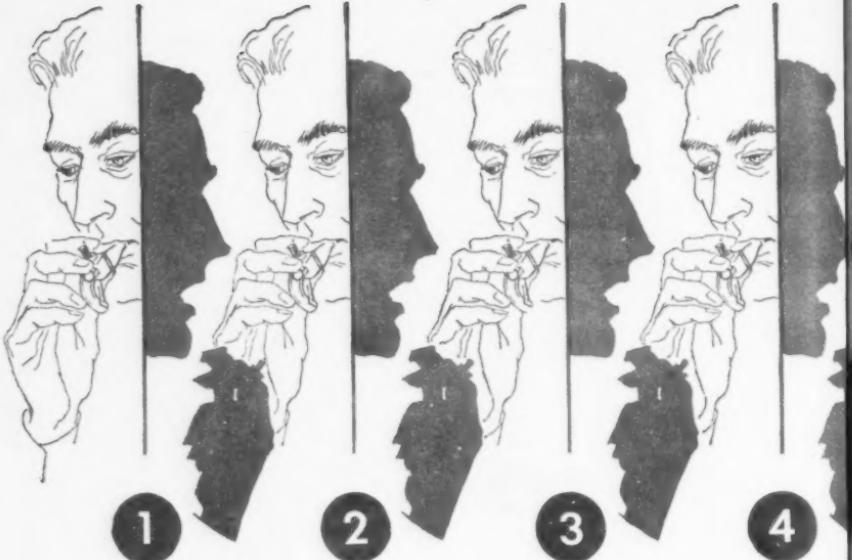
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1. Krasno, L. R., Grossman, M., and Ivy, A. C. (1948), The Inhalation of Norisodrine Sulfate Dust, *Science*, 108:476, Oct. 29. 2. Krasno, L. R., Grossman, M. I., and Ivy, A. C. (1949), The Inhalation of (3',4'-Dihydroxyphenyl)-2-Isopropylaminoethanol (Norisodrine Sulfate Dust), *J. Allergy*, 20:111, March.

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RALPH L. GORRELL, M.D., *Editor*

GEORGE LAKE, *Publisher*

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Editorials

How to Manage Patients

The reading of an instructive little article in the *Medical World of London* reminds one again that we all tend to speak and think of our successes.

Failures and loss of patients drop in to the irritating depths of our subconscious. In private practice, more patients are lost through mismanagement of the patient and his family, than through errors in diagnosis or treatment.

Mitchiner¹ believes that errors can be classified under these headings:

1. Misdiagnosis

Including a.—withholding a diagnosis from a patient because of the gravity of the prognosis, b.—ignorance, often due to reluctance to ask for consultation and c. — failure to carry out a complete history and physical examination, plus such laboratory aids as are needed.

2. Errors in Prognosis

Prognosis is vitally important to the patient, his family and his employer. The duration of illness, the time away from work, the probable expense to the patient and the loss of efficiency on return to work, should be stated roughly or if it is impossible to do so, give the facts frankly with reasons for inability to foresee the future.

Usually it is best to give an estimate a little longer than that to be expected. No accurate prognosis can be given in malignant disease. "Recovery is always possible and death is not certain until it occurs".

3. Failure to Assess Patient

Failure to accurately assess the patient as a person and to appreciate his psychological quirks. Mitchiner feels that if a patient irritates him or vice versa, he makes the diagnosis after careful examination, then tells him to consult a colleague for treatment.

4. Failure to Explain Condition

Failure to explain the patient's condition in simple terms, so that he can understand it. The old days when the patient felt that the physician knew all and should not be troubled to come down to the common level of explanation in every day terms are gone, and for the best.

Enough explanation must be given so that the patient will be sure that there is no further cause for worry. Be sure to state that no malignant growth or tuberculosis was found, if such a statement can be made dogmatically.—R.L.G.

*1. Mitchiner, Philip P.: How Did It Happen? *Medical World* (England), 70:312 (Apr. 29) 1949.

Does a Medical Journal Help You?

This is a legitimate question; as we look over the publishing list and note the hundreds of books on medical subjects, that are published each year. If all the knowledge is compressed into permanent volumes, why is there any need for a medical journal?

One reason is that it is so easy to let a book remain on the shelf while a journal coming as it does, every month, is automatically inspected—even so, it is not read thoroughly. An article, or other material, bearing on cases that are being seen in practice is read at the time, instead of looking forward to studying the whole subject thoroughly, at a later date.

Newer ideas. Within 30 days a medical journal can present a new idea that will not appear in a medical text for one to three years. This is not always an unqualified blessing, as there is a tendency to rush into print with very dramatic ideas which prove to be erroneous and have to be corrected by further publication. There is a definite saving in time, however, over the usual long delay that is necessary in getting a book together and seeing it through the various processes of publication. Because of the expense involved in publishing a book, there is a little tendency also not to publish material not fully approved by the author, who has prejudices, as all human beings do.

The medical journal, which is original, can present ideas in a manner which is so striking that you will be able to use them in practice. It will help you to make a better diagnosis, print and illustrate various methods of treatment, note the mistakes that

the other fellow has made, tell you which medical books are worth-while, and be an everyday worker in your practice.

The medical journal can concern itself with your problems and practice. The man who writes a book writes it about one condition, or about one field of medicine, and gives little attention to your problems.

Medical books are written by one, or a few, men. Medical journals contain the writings of hundreds of men, and all that that implies in freedom of expression, lack of hampering prejudices, willingness to entertain new ideas, and so on.

The worth-while medical journal will offer you a brief review of some fundamental aspects of medicine in each issue. Whether this part of the journal helps you or not depends upon whether you take the time to read it thoroughly.

Except for the postgraduate courses in which a week, a few weeks, or occasionally a month is spent, the average physician must learn, must review his medical knowledge, in short spasms. He should do this in the way that works out best for himself—either by planning out a program of reading so that his full field of practice will be covered in roughly 3 years time, or he can read a journal which endeavors to present such a program. Studying is not something which can be put off until next week or next month. Ten minutes a day is worth much more than 50 minutes on a week-end. Especially, when the week-end may be interrupted by deliveries, emergencies, and so on.

The Diagnosis of

Amebiasis

By Lt. Col. Ralph W. Mendelson
Medical Corps, U.S.A.F., Albuquerque, New Mexico

The increasing number of cases of amebiasis masquerading under the guise of various disease entities makes it imperative that we forget the mistaken idea that dysentery is the sole manifestation of an amebiasis and be alert to the varied lesions that may result from *Endameba histolytica* infestation. Medical officers and civilian physicians have become dysentery conscious to a high degree, but fail to fully appreciate the fact that there are a variety of extra-luminal conditions demanding accurate diagnosis if the patient is to benefit by specific therapy. These visceral and other manifestations are serious, frequently difficult to diagnose, and not infrequently lead to complete incapacitation and death unless recognized and given the benefit of anti-amebic therapy. I prefer to think of the intestinal pathologic changes in terms of amebic colitis, with or without dysentery. To simplify the classification of amebic lesions the following schema is presented, which portrays the lesion-evolution by this tissue parasite in the human body and on that basis is easy to remember. A study of the illustrations depicts the same with special reference to drawings numbers 1 and 2.

Amebiasis

- 1—Latent.
- 2—Colitis
 a—Acute with dysentery.
 b—Chronic, with or without dysentery.
- 3—Ulceration
 a—Superficial.
 b—Deep.
- 4—Hemorrhage ..
 a—Acute.
 b—Chronic with secondary anemia.
- 5—Perforation ...
 a—Intraluminal with peritonitis.
 b—Extraluminal with faecal fistula.
- 6—Obstruction ...
 a—Intraluminal from cicatrization.
 b—Extraluminal from adhesions.
- 7—Hepatitis
 a—Acute.
 b—Chronic.
 a—Liver—
 Single { Microscopic or
 Multiple { Macroscopic
- 8—Abscess
 a—Lung— { Direct
 Indirect
 c—Brain and other organs
- 9—Granuloma

Epidemiology of amebiasis: Man is the potent source of infection. The asymptomatic patient constantly expelling cysts spreads the disease. Ten per cent of the U.S. population harbor the organism. Infection may be either direct or indirect, an intermediate host not being essential. The fly acts as a pernicious mechanical vector in a vari-

ety of ways. Having feasted on cyst laden material it may convey the infection on its legs when it alights on one's food. In order to obtain a feeding the fly must first liquify its meal and it does this by regurgitating the contents of its stomach which may also harbor cysts. Having satisfied its hunger it repays the hospitality by defecating cyst containing material on one's food.

The highest incidence of infection is in those areas where the environmental conditions lend themselves to difficult sanitary control and where personal hygiene is not rigidly practiced although no climate is exempt.

In discussing the diagnosis of the various disabilities incident to an amebic infection let us take them up in their order of frequency as outlined above.

Latency

Latency is characteristic of the disease and in that respect is not unlike syphilis whose victims not infrequently present central nervous lesions without previous primary or secondary manifestations. *Inactive amebiasis does not exist.* The organism, being a tissue parasite, lives at the expense of its host and the damage done may be symptomatic or asymptomatic; the degree of host disability is not a measure of the pathologic change present. An unknown percentage of cyst passers



Fig. 1. Ulceration of the colon showing endamoeba histolytica invading the sub-mucosa—"The Zone of Invasion."



Fig. 2. Schematic representation of the epidemiology of amebic abscess. From the colon via the portal circulation to the liver. The liver is retracted to demonstrate the abscess. This may be termed "The Zones of Occupation."

never become symptomatic. On the other hand, many infected individuals suffer periodic bouts of distress when the host-parasite balance is disturbed. Their disabilities frequently are ascribed to "congestion of the liver", "gall-bladder trouble", or "chronic indigestion". It is the individual who suffers from a latent or semilatent infection who needs treatment as well as the active case as, stated above, the cyst passer spreads the infection, not the individual suffering from dysentery and passing vegetative amebae.

Amebic Colitis With Dysentery

In a discussion of amebic dysentery it may seem academic to detail the great variety of conditions listed below that might come up for consideration, but such is not the case. A patient suffering from amebic colitis with dysentery should give a history of exposure to infection, but

ORIGINAL ARTICLES

such suggestive histories are not always obtained. Obviously, a returned service man from the Pacific theater or other hyper-endemic area would be considered as having been exposed. The incubation period may be short or long with vague pre-dysenteric gastro-intestinal symptoms. Once established, stools are less frequent, painful or copious than in bacillary dysentery. The cellular content of the stool is minimal, and vegetative amebae with ingested red cells may be demonstrated. Compared to other types of dysentery, especially bacillary infections, amebic dysentery is much less dramatic in its onset. In the former the patient is frequently glued to the pot but not so in the latter. In my experience the insidious, subacute onset has been observed more often than the full blooming, acute case. A moderately high leukocytosis is common and, with the exception of the rare fulminating case, there is seldom any toxemia. The amount of blood and mucus in the stool depends entirely upon the extent of the ulceration in the colon and attempting to make a clinical diagnosis by the macroscopic appearance of the fecal matter will only lead to failure.

Differentially the following conditions must at times be considered. The list is not complete, but serves as a reminder of the more impor-

tant types of diarrhea that may confuse the picture.

Diarrhea

	Example
1—Psychogenic ...	Mucus colitis. Ulcerative colitis. Nervous diarrhea.
2—Protozoal	Balantidiasis. Giardia lamblia infection. Sub-tertian malaria.
3—Toxic	Metals. Thyrotoxicosis.
4—Helminthic ...	Worms. Flukes.
5—Bacterial	Staphylococcus. Streptococcus. Bacillary.
6—Avitaminotic ..	Vitamin "A". Vitamin "K". Sprue. Nicotinic Acid.
7—Allergic	Sea and other types of food.
8—Cardio-renal ..	Decompensated cardio- renal disease.
9—Mechanical ...	Partial obstruction from adhesions, tumors and other causes.

Psychogenic diarrhea should not be difficult to rule out. A detailed history frequently reveals a past psychic trauma; the stools are negative for *Endameba histolytica* and proctosigmoidoscopic examination portrays an entirely different picture than that observed in amebic colitis with dysentery. The patient is usually "high-strung" and the normal irritations incident to being alive are sufficient to precipitate an attack of diarrhea. In doubtful cases the exhibition of anti-amebic medication as a therapeutic test avails nothing.

Protozoal and *Helminthic* diarrheas will be diagnosed by stool examination. The patient may give a history of passing worms; there may be a secondary anemia and a degree of eosinophilia. The physician may be satisfied to make a diagnosis on the basis of the patient's statements, but one must bear in mind the possibility of multiple infections, espe-



Fig. 3. Multiple amebic abscesses of the liver.

cially in patients who have been exposed to a tropical environment. Sub-tertian malaria may manifest itself in the form of a very bloody dysentery and if the patient is treated for amebic colitis on the basis of his intestinal symptoms he will expire from his malaria. *Every physician practicing in the tropics should consider his patients guilty of multiple infections until proven innocent.*

Toxic diarrheas, especially those resulting from metal poisoning, usually will be history revealing. The diarrhea incident to thyrotoxicosis is confirmed by the physical examination, the increased basal metabolic rate, the decreased blood cholesterol and the negative stool findings.

Bacterial diarrheas entail more detailed laboratory work, such as stool cultures on a variety of differential media. The patient is frequently acutely ill and toxic. In the acute food poisoning cases a history of dietary indiscretion or suspected food spoilage may be obtained.

D e f i c i e n c y diarrheas include sprue, vitamin "A", vitamin "K" and nicotinic acid deficiencies. In sprue we have the characteristic early morning foul smelling, bulky, foamy, light colored stool associated with the other signs and symptoms of the disease not the least important being the anemia, the flat blood sugar curve and the hypo or anacidity.

In vitamin "A" deficiency the diagnosis may be suggested by dark adaptation tests and the characteristic skin lesions. Nicotinic acid deficiency, besides the diarrhea, manifests itself clinically in terms of dermatitis, mouth lesions, proctitis and vaginitis plus nervous system involvement to the extent of a possible combined sclerosis of the cord. The diarrhea is often intractable and incapacitating. Vitamin "K" defi-

ciency may be observed in a variety of intestinal disorders and patients suffering from diarrhea and hemorrhages should be tested for their prothrombin time in the absence of other etiological factors.

Allergic diarrheas are frequently termed "ptomaine poisoning," "virus X," or given some other hang-your-hat-on-a-crutch diagnosis. The allergic type of gastrointestinal dysfunction needs more than a household or pseudo-scientific term if the patient is to protect himself from repeated allergic insults. A trial and error diet may infrequently disclose the offending food. The attack is acute, usually violent, stools free of blood or mucus and, of course, negative for amebae histolytica. There are frequently other allergic manifestations that point to the correct diagnosis.

C a r d i o R e n a l diseases should present no great difficulty if one is mindful of the lesion in the colon in the advanced case. In the chronic uremic state we may observe, as the only clinical manifestation, an ulcerative colitis with severe dysentery. Decompensated cardiac patients frequently consult a physician for vague gastrointestinal complaints that may suggest chronic amebic colitis without dysentery long before other clinical manifestations of heart disease suggest cardiac decompensation.

M e c h a n i c a l irritation due to partial obstruction, whether due to tumor formation or some other form of obstruction, may result in intractable diarrhea. In this connection one must bear in mind the type of obstruction due to hypercicatrization and neoplasm in the form of granulomata of amebic origin. This will be taken up later in more detail.

U l c e r a t i o n and **H e m o r r a g h e** demand the same extensive differentiation as does undiagnosed dia-

rhea. It is remarkable how extensive the ulceration in amebic colitis may be without dysentery. Colonic ulceration with bloody stool, with or without pus and mucus, may obtain in a great variety of conditions. Malignancy of the gastrointestinal tract may give rise to either occult blood in the stools or frank hemorrhage. With degeneration of the malignant growth a sanguineous, muco-purulent discharge is not uncommon, especially in carcinoma of the colon.

Proctitis, hemorrhoids, anal fissure and rectal stricture may be the cause of bleeding, or may complicate an amebic colitis, and here again one must constantly keep in mind the possibility of multiple etiological factors for blood and mucus in the stools.

Intussusception gives rise to bloody stools in over 75 per cent of cases and there is usually mucus present. Occurring often in infants with an acute onset, the pain is severe and a tumor mass may frequently be palpated—the sausage shaped tumor along the course of the colon.

Condylomata, rectal polyps and papillary varicosities of the anal canal may be a source of bleeding in combination with diarrhea. Various blood dyscrasias may manifest themselves with bloody stools. Patients with portal cirrhosis may suffer intestinal hemorrhages for years before other symptoms of liver damage appear. Innumerable less common causes for blood and mucus in the stools might be mentioned, but the above are conditions which one thinks of in dealing with patients suspected of an amebic infection in whom the diagnosis is not immediately evident.

Perforation

Determining the cause of intestinal perforation is usually a postoperative or a postmortem procedure. In



Fig 4. To illustrate partial obstruction of the colon from hypercicatrization of healing ulceration.

the former it is of prime importance, especially if due to amebiasis, as treatment of the immediate disability and neglecting the underlying cause predisposes the patient to future perforating episodes and other disabilities.

A single perforating type of ulcer may be the patient's undoing while extensive superficial ulceration may be present and produce no symptomatology.

Obstruction

Partial obstruction, either intraluminal or extraluminal, may be the sole manifestation of an amebic infection. Excessive cicatrization in healing ulcers may produce the condition, and this type of obstruction obviously needs surgical treatment as do the types incident to adhesions. Small gut obstruction due to adhesions is well illustrated in number 9. Tumor formation in the form of granulomata will be taken up later.

Hepatitis

Does the liver suffer an acute inflammatory reaction in the absence of abscess formation? It is difficult to accept such a diagnosis. The Endameba histolytica is a tissue parasite and lives at the expense of liver cells when located in that organ. In all probability microscopic abscess formation is present in every case of amebic hepatitis. It is quite impossible to clinically differentiate so-called hepatitis from liver abscess.

The British are more impressed with the diagnosis of hepatitis than

are we. During a period of ten years' residence in the tropics I have observed patients being treated for hepatitis who were, in fact, suffering from a variety of conditions not in any way related to amebiasis. I have seen patients suffering from congestive heart failure and malaria treated for amebic hepatitis as well as frank cirrhosis, splenic anemia and other conditions causing enlargement of the liver with low grade fever and, at times, diarrhea. We are just as prone to overincriminate the Endameba histolyta as the cause of a variety of non-amebic conditions in a hyperendemic area as we are to neglect it almost entirely in a less endemic region.

A "chill on the liver" is a popular diagnosis with Europeans living in the tropics. This is usually a Monday morning diagnosis after a week-end of gastro-intestinal excess with food and alcohol. These continued insults to the liver, with the resulting lowered resistance, constitute a predisposing factor in the production of amebic abscess in patients who harbor the organism. I mention this type of disability in view of the fact that I have notes on a case in which the patient suffered an accidental death and came to autopsy. Microscopic abscess formation was present in the liver and confirmed by an associate professor of pathology in one of our leading medical schools.

Abscess

Amebic abscess of the liver may be microscopic or macroscopic, single or multiple. The patient frequently gives no history of dysentery and the liver may or may not be clinically enlarged. Approximately 80 per cent of macroscopic abscesses are located in the right lobe. If developing late in the course of chronic amebiasis the abscess is usually single and large and if developing early during the course of

the acute or sub-acute phase usually multiple. In shape they may be spherical, hourglass or one or more may be separated by a thin wall of liver and inflammatory tissue.

Acute Amebic abscess of the liver manifests itself by an irregular, remittent fever, leukocytosis, pain over the liver, chills and sweats. Jaundice is seldom noted and shoulder pain depends entirely upon the location and size of the abscess.

Chronic abscess is usually located in the right lobe, pointing upward and the liver is enlarged and painful. Shoulder pain is more frequent than in acute abscess. The patient gives a history of weight loss, vague gastro-intestinal manifestations and seldom a history of dysentery. If the enlarged dome-like liver mass encroaches upon the diaphragm there will be irritation of the same and frequently unproductive cough, leukocytosis and low grade fever is present and x-ray examination will confirm the enlarged liver. If the upward protruding mass is large it may suggest lower lobe consolidation. Jaundice is uncommon and liver function tests are negative. These findings would certainly suggest liver abscess yet it is remarkable how far astray one may go if not "amebic conscious".

Case History: An adult male, aged 45, was admitted to the hospital complaining of loss of weight and appetite over a period of some three months. His previous history was entirely noncontributory. The diagnosis by the examining physician, after careful physical, x-ray and proctosigmoidoscopic investigation, was prostatic malignancy with metastatic growth in the liver. Upon further examination the following pertinent findings were elicited. The nodular prostate was, in fact, nor-

mal and the "small tumor masses" reported were the remains of a one time injection treatment for hemorrhoids. A repeat proctosigmoidoscopic examination revealed numerous pin-point ulcerations with normal intervening mucous membrane. The examination of a direct hanging drop of mucus showed many vegetative amebae. From the "metastatic malignant growth", one thousand cc. of characteristic pus was evacuated. Open drainage, in combination with penicillin and specific antiamebic therapy, resulted in complete cure and follow-up studies were entirely negative.

This case illustrates two pertinent points. The examining physician never thought of amebiasis and he failed to follow up his sigmoidoscopic examination with the microscope.

The diagnosis of liver abscess is not a simple procedure in all cases. Stool examinations are, of course, indicated in all patients complaining of upper quadrant distress. Acute cholecystitis must be considered. In such a condition the patient is more apt to suffer from acute gastric distress with nausea and vomiting; the temperature is apt to be higher and jaundice more frequent. Rebound tenderness is present and, if spreading in character, indicates rupture. The gall-bladder may at times be palpated and in the very acute cases prostration may be great; this does not obtain in acute amebic abscess. Acute attacks of cholecystitis are frequently limited in duration, except in empyema of the gall-bladder, in which case the signs and symptoms may last for weeks. X-ray examination will not show liver damage.

Sub-phrenic abscess and a high retrocecal appendicitis may simulate liver abscess and renal carbunc-



Fig 5. Cross section of amebic granuloma showing vegetative amebae in spongy type of tissue.

cies on the right side may have to be considered. If the clinical condition justifies surgical procrastination, and definitely if cysts are found in the stools, specific treatment should be initiated before subjecting the patient to a surgical procedure as the miliary type of amebic abscess will respond to medication and at times the single acute abscess.

Chronic abscess of the liver may simulate malignancy as the patient usually gives a history of considerable weight loss, chronic indisposition and pain over the enlarged liver. From the x-ray findings a pleurisy with effusion or lower lobe pathology may be suspected. Diagnostic aspiration is indicated, providing the patient and the surgeon are prepared for a more radical procedure, sometimes necessary. Chronic abscess does not present the acute toxic picture seen in severe acute abscess unless there is an extensive secondary infection.

Of the other abscesses pulmonary localization comes next in frequency. It may be a direct extension from the liver through the diaphragm and if connected with a bronchus the expectorated contents will frequently

reveal ameba. The pulmonary infection may be indirect via the hepatic veins. In any event, the signs of consolidation develop and a true amebic pneumonitis presents itself. In the final analysis the diagnosis depends upon demonstrating the causative organism or subjecting the patient to a therapeutic test if other diagnostic measures fail and the clinical picture is suggestive.

Since the *Endameba histolytica* may invade any organ in the body one might list a great variety of conditions as diagnostic problems. This would be academic as none of them produce pathognomonic clinical pictures and if the physician is mindful of the possibilities half of his troubles will be over.

Granuloma

Amebic granuloma is an interesting and infrequent manifestation of amebiasis. Usually located in the cecum, it may produce partial obstruction. Total obstruction is not common as the mass is spongy and may be bypassed by the semi-liquid faecal stream. The condition is a late lesion due to a chronic infection and when present in a patient in the upper age group it will suggest malignancy. Examination reveals a mass in the right lower quadrant, not especially tender, and without the "feel" of a malignant growth. There are no metastatic growths and, again, there frequently is no history of dysentery. Definitely, in hyperendemic areas, patients presenting themselves with this condition should be thoroughly examined and repeated laboratory examinations made to determine the possibility of amebiasis. If confirmed, therapeutic measures should be instituted and if not confirmed, but suspected, the patient should still have the benefit of specific medication before being operated upon, as amebic granu-

loma responds to anti-amebic medication.

Appendicitis

Reviewing the postmortem notes on several hundred deaths over a period of ten years in the tropics I find no case of amebic appendicitis in which the cecum was free of pathology. Surgical intervention in a case of "amebic appendicitis" is a serious procedure for the patient. Following the Chicago epidemic 123 cases were operated upon and the death rate was exactly 41%. Intestinal surgery in the presence of amebic pathology is postponed until the infection has been eradicated, or is indicated as a last resort under extenuating circumstances.

Conclusions

The diagnosis of amebiasis entails:

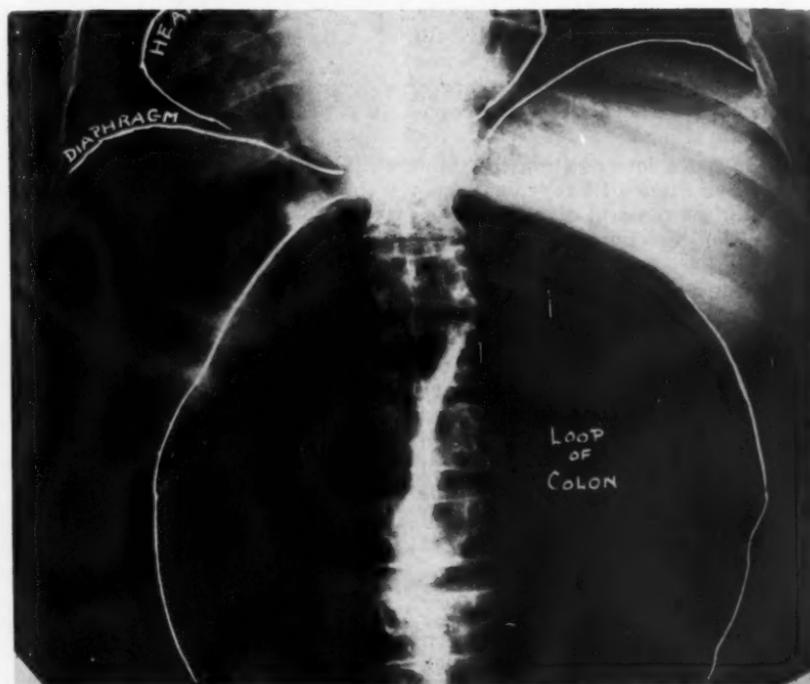
- 1—A painstaking history with careful evaluation of all gastrointestinal disabilities.
- 2—A careful physical examination including proctosigmoidoscopic investigation with immediate examination of intestinal contents so obtained.
- 3—Repeated stool examinations including microscopic for:
 - A—Vegetative amebae.
 - B—Cysts.
 - C—Stool cultures.
- 4—Complement fixation tests.
(questionable value)
- 5—Therapeutic tests.

Of the various laboratory procedures the complement fixation test is the least reliable as too many false positives are reported. The therapeutic test is permissible in suspected cases in which other diagnostic measures prove unavailing and in cases in which limited procrastination is not harmful to the patient.

Last, but not least, is an "amebic alertness" on the part of the physician. It is his insurance against a missed diagnosis and the patient's assurance for correct treatment.

The "Acute Abdomen" VOLVULUS OF THE SIGMOID

(Joseph Levitin of San Francisco well summarized the value of simple or "flat" abdominal x-ray in diagnosing acute abdominal conditions, in *Clinical Medicine* for March 1950. Because of lack of space his many interesting cases could not all be published at once but are being presented serially.—Ed.)



Case Number 3

A male of 50 years complained of acute onset of crampy abdominal pain which was followed by marked distention of the abdomen. The film of the abdomen reveals a markedly distended loop of bowel rising out of the pelvis and lying about in the mid-abdomen. A diagnosis was made of a volvulus of the sigmoid. This diagnosis was confirmed at operation.

A Sound Rule

I resolve to speak ill of no man, not even in a matter of truth, but rather by some means to excuse the faults that I hear charged upon others, and, upon proper occasions, speak all the good I know of everybody.—Benjamin Franklin.

Diagnostic Error:**Bone Enlargement**

A 14 year old boy entered the hospital with a progressive and relatively painless enlargement of the lower half of the right thigh.

Examination revealed spina bifida and paralytic deformities of both lower extremities while the lower half of the right thigh was enlarged to about twice the size of the opposite limb.

X-ray of the lower half of the right thigh (See Figure 1.) revealed separation of the femoral diaphysis from the lower epiphysis. There were multiple periosteal accretions thickest about one inch above the lower end of the diaphysis and gradually diminishing to the middle third. At the lower end of the diaphysis the periosteal reactive tissue was very irregular and closely associated with some fragments of bone from the extremity and a collection of amorphous calcium deposits in the soft tissues. There was some general increase in the general density of the lower third of the diaphysis.

Course

The lesion slowly resolved upon conservative management. The leg was clinically and radiologically normal at the time of an 18 month follow up.

Diagnosis

Neuropathic lesion, analogous to a Charcot's joint.

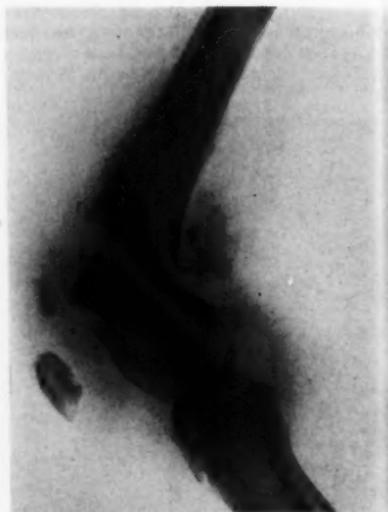


Fig. 1. Bone Enlargement

Discussion

Although the initial clinical and radiological appearance suggested a fracture through a sarcomatous lesion, amputation was postponed because of the associated cord and nerve lesions. The recovery is identical to that of a neurotrophic joint (Brailsford, J.F., "Changes in Bones, Joints, and Soft Tissues Associated With Disease or Injury of the Central Nervous System", *British Journal of Radiology*, 320-328, October 1941).

Specialization

The incessant concentration of thought upon one subject, however interesting, tethers a man's mind in a narrow field.

—Sir William Osler.

PROBLEMS IN PRACTICE



(CONSULTATION SERVICE)

Symptoms from An Infected Cervix

Question:

What symptoms or signs should make one suspect an infected cervix? What about the cervix remaining after a partial hysterectomy? I do not refer to a definite ulcer or neoplasm. M.D., Baton Rouge, La.

Answer:

The normal cervix can be pushed in all directions without pain. If displacing the cervix results in definite pain in a woman who has no other pelvic lesion and who is psychically well balanced, it may be tentatively assumed that a chronic cervicitis exists. If motion of the cervix reproduces the pain complained of, the cervix may be the cause of the pain.

C. G. Collins of the Ochsner Clinic, New Orleans, lists these symptoms from the cervical stump remaining after subtotal hysterectomy:

Pelvic pain	53%
Leucorrhea	48
Bloody discharge	39
Dyspareunia	31
Backache	28
Urinary discomfort	32
Bearing down pain	17

Collins feels that a diseased cervix commonly causes dyspareunia; in his experience, removal of the stump of the cervix usually relieves the dyspareunia.

Empyema of the stump may result in disability with symptoms resembling those of arthritis.

Breast Cancer

Question:

What is the best advice for a patient with carcinoma of the breast? Should she have preoperative x-ray treatment followed by radical removal? Should radical removal follow surgery? Will x-ray or hormone therapy be best in cases that are advanced or recur or metastasize? M.D., San Anselmo, Calif.

surgery should be followed, not preceded, by x-ray therapy; 2. X-ray therapy should never be used in operable cases, as the results are inconstant; 3. Testosterone propionate in large doses, is often effective in overcoming anemia, relieving pain and disability and metastases regress (100 mg. injected three times weekly). Improvement follows after discontinuance of testosterone therapy. Or stilbestrol may be given in 15 mg. doses daily for an indefinite period; results are not as good as with testosterone, however.

Answer:

Experience at the Memorial Hospital, New York City, in a large series of well-controlled cases indicates: 1. Radical

Locating the Position of Intestinal Tube

Question:

How can we be sure of the position of the tube and to assure ourselves that the suction into the tube has passed beyond the pylorus, without moving the patient to the x-ray room? We do not have a portable x-ray machine in our small hospital.—M.D., Colorado.

Answer:

There are several comparatively simple methods which may be used. If the tip of the tube is still in the stomach, a large amount of water may be injected and returned promptly by suction. If it is in the small bowel, the quantity of fluid is much smaller.

The type of material returned by aspiration varies, but this is so much changed by vomiting, that it is of little practical help. A new sign is described by Samuel McLanahan of the Union Memorial Hospital of Baltimore in the *Journal of the American Medical Association*, January 3, 1948. He uses a syringe of 20 cc. capacity filled with 15 cc. of air, and attached to the tubing leading to the balloon of the Miller-Abbott tube. The plunger is pushed in and withdrawn inordinately so as to inflate

and deflate the balloon. This creates a noise or racket within the abdomen, which the observer can listen to with a stethoscope. The observer moves his stethoscope about the abdomen, checking the area of the maximum intensity of sound.

If a tip is passed into the intestine, he will find a definite point where even the sound of air rushing into and out of the balloon seems to be almost in his ears. If the tube is in the stomach, the sound may not be so sharply localized, but will be audible across the epigastrium, especially to the left and in general over the area where the stomach is known to be situated. In addition, this sound is somewhat more resonant.

Satisfactory sounds, though less audible, can be produced by utilizing the suction tube itself instead of the balloon. Less accurate localization is possible because of the multiple openings in these tubes, but one can, in most instances, readily confirm or disprove the impression that the tube has passed into the intestine. He states that the tube has been employed for several years in many patients and has been repeatedly checked by x-ray.

Treatment of Multiple Sclerosis

Question:

Is there any form of treatment that will help a patient with multiple sclerosis? I have a young man of 24 whose legs are so stiff that he finds it very difficult to walk.—M.D., Des Moines, Iowa

Answer:

There is no curative treatment for multiple sclerosis. It is helped by the use of vasodilators; the injection of nicotinic acid in 2 cc. doses causes a noticeable relaxation of the spastic muscles. The patient is often much improved by this therapy. Horton at Mayo's uses histamine intravenously dissolved in 500 cc. of saline solution. This treatment is given daily and the results are often remarkable in that the patient can walk better within a very few minutes. For

full details, Horton's articles should be referred to in the medical literature, or he may be addressed at the Mayo Clinic, Rochester, Minnesota, for reprints.

The patient with multiple sclerosis must be kept on the move and not be allowed to sit for long periods. The intravenous injection of tetraethyl ammonium in 2 to 3 cc. doses also provides relaxation, but the tendency toward fainting makes this form of treatment quite uncomfortable to the patient.

Letter from E. Y. Williams, M. D., Department of Medicine, Howard University, School of Medicine, Washington, D. C.:

"I am deeply appreciative of the fact that you noticed my preliminary report in the treatment of Multiple Sclerosis with large doses of Vitamin C. We do

PROBLEMS IN PRACTICE

not believe in the spontaneous improvement. We believe the change is effected outside the environs of the treatment given by the physician, hence the so-called spontaneous improvement. The change from the regular diet to the diet now given the individual considered ill may be the answer. Therefore, he gets something now he never got when he

was considered well and hence in so many cases the spontaneous improvement." — E. Y. Williams, M. D.

[The use of large doses of Vitamin C may or may not be the answer, but it is certainly a harmless form of treatment. In a few cases, injection of Vitamin B Complex seems to be of value. Ed.]

Heartburn

Question:

"Heartburn," a burning pain in the epigastrium, is a frequent complaint. If it is relieved by milk, soda or food, should ulcer of the stomach or duodenum be suspected every time? Which patients should be x-rayed and which should be observed for a period of time? What conditions not in the stomach can cause heartburn? M.D., Glen Ellyn, Illinois.

Answer:

There is no longer any need to guess as to the actual cause of heartburn. The Wolffs have proven that gastric hyperactivity is frequently associated with heartburn and epigastric pain of a gnawing quality, usually more intense during periods when the stomach was empty and usually relieved by taking food, milk or alkalies. The subject had an opening into the stomach and they could directly observe the effect of foods and emotions on the stomach.

Decreased activity, gastric hypoactivity, produced "fullness" in the epigastrium and nausea.

"The individual whose stomach is hyperactive is physiologically prepared for food whether or not he has an appetite. He often feels angry in his need of being cared for or fed, but he is accepting

his position and situational threat and preparing for fight or flight. The individual whose stomach is hypoactive is not accepting the challenge of the situation. His associated nausea expresses his dis-taste for the situation."

Life situations give rise to anxiety and conflict, to which the patient responds by emotion and reaction (ulcer syndrome) or by acceptance with disgust and poor resignation (indigestion).

It is more important for the physician to learn the life problems of the patient than to study his stomach with barium. Even if a definite ulcer is present, the patient must be psychically improved before his stomach will not over-respond to emotions, fights at home and disagreements elsewhere.

Never ask a patient, "Do you worry?" Find out his worries and give him the relief of talking about them. The physician must learn to keep his mouth shut and let the patient put the problem before the physician and before himself. This alone often helps the sufferer to see his problem, and may be curative.

A neat diet list and the newest gastric medication may relieve symptoms but should not cause the physician to overlook the cause.

Removal of Splinter Under Nail

When a splinter has been driven under a finger or toe nail, and broken off so that it cannot be reached with forceps, a very useful procedure, especially in children, is to soften the nail by 1. soaking in warm water, 2. pare down the

nail with a sharp scalpel or razor blade and thus removing a piece of nail over the splinter and giving direct access to it. After removal protect the gap in the nail by applying collodion or small piece of adhesive tape.—J. G. Bonnin, F.R.C.S. in *Medical World (Eng.)*, Nov. 21, 1947.

CONSULTATION SERVICE

New Drugs

Question:

How may I protect my patients against receiving new and not completely proved drugs and yet give them the best in newer advances in research? M.D., Oneill, Nebr.

Answer:

Torald Sollman, one of the leading pharmacologists, has well said, "You may protect yourselves and patients from being victimized by adhering to these principles:

1. Restrict your prescribing to the smallest number of drugs sufficient for your needs.

2. Do not 'try' out a new drug unless you have a good reason.

3. Scrutinize carefully before you add needlessly to the drugs with which you are familiar.

4. Insist that a new drug has been

thoroughly studied before you try it."

"Do not make up your mind, and especially do not talk or write articles about it until your conclusions can stand up before critical judges. The publication of a few false judgments that could have been avoided may blast a professional reputation." (*Cleveland Clinic Quarterly*, Jan. 1950).

Detail men are often wonderful fellows, but their judgment is, of course, zero. If a disease has no effective treatment, then only is a physician justified in gambling on a new and relatively untried treatment—what has the patient to lose? Remember it is difficult to "try" a new drug in your own practice, unless you follow the patients quite closely, write down careful histories and follow-ups, use as controls patients who receive none of the medication, and so on.

Postoperative Hernia Patients: Ambulatory?

Question:

Fifteen years ago, I kept my hernia repair patients in bed for two weeks following herniorrhaphy. Since the war, I keep them in bed one week. Other men, I note, are getting them up in a day or two. What are the facts? Can one get such patients out of bed in 24 hours without harm? M.D., St. Charles, Ill.

Answer:

Otto Preston, M.D., Medical Director, Chevrolet-Flint Manufacturing, Division of General Motors Corporation, Flint,

Michigan studied a comparative series of hernia patients. 100 patients were allowed up at once (12 to 36 hours); 100 were kept in bed an average of 13 days. He feels that "Early postoperative ambulation of surgically repaired hernias results in reduced postoperative complications, shorter and improved convalescence, earlier return to work, economic saving to the patient, and more important, a decided reduction in frequency of recurrence." (*Indust. Med. and Surg.*, Jan. 1950).

Buffered Aspirin

Question:

Can the effectiveness of aspirin be increased? Some of my patients have gastric distress following aspirin, what do you suggest? E.K., M.D., Chicago, Ill.

Answer:

You may increase the effectiveness of aspirin by prescribing it in the form of

Bufferin (Bristol-Myers). It has been reported that after Bufferin is ingested the blood salicylate levels are higher than those reached 20 minutes after aspirin alone is taken. Bufferin is also well tolerated for it contains the antacids magnesium carbonate and aluminum glycinate.

Old Undiagnosed Fractures

Question:

What is the best way of treating old undiagnosed fractures such as the following: 1. Fracture of scaphoid tubercle in wrist, occurring at least eight years ago while playing football. It was never casted, only splinted, and the boy continued to play football the rest of the season. Now he has pain in the wrist while bowling or when doing the milking.

2. Fracture of the tip of tibial malleolus, occurring six months ago. Not diagnosed at the time. Now has pain in the ankle when bowling or any sudden extension of ankle joint.

X-rays disclosed old fractures, with the fragments separated. I recommended an elastic one piece wristlet for the former and elastic anklet for the latter. Is there any further therapy that

could be recommended: How about diathermy or x-ray therapy?—Cambridge, Wis.

Answer:

1. Old fractures of the scaphoid should first be treated by immobilizing the wrist and the thumb, up to the second joint, in a snug, well fitting plaster cast for 6 to 8 months. Drilling or removal of the damaged fragment may be necessary for those not responding to immobilization for a long period.

2. Injection of procaine solution into the tender, painful area will relieve pain and permit much better function. If the ankle mortise has been severely damaged so that arthritis will result as a result of repeated traumas from walking, orthopedic surgery will probably be necessary.

Newer Treatment of Blood Disorders

Agent	Diseases
Liver extract	Pernicious anemia
Folic acid	Sprue; pregnancy macrocytic anemia (pernicious anemia of pregnancy) Gastrointestinal macrocytic anemias
Vitamin B ₁₂	Pernicious anemia
Roentgen radiation	Harmful in acute leukemias Chronic myelogenous leukemia Chronic lymphatic leukemia
Radioactive phosphorus	Chronic myelogenous leukemia Polycythemia vera
Urethane	Chronic myelogenous leukemia Multiple myeloma
Aminopterin	Acute leukemia
Nitrogen mustards	Hodgkins disease; lymphosarcoma; reticulum cell sarcoma; (after x-ray)

C. C. Sturgis, M.D., University of Michigan Medical School, Ann Arbor, Mich.

DIAGNOSTIC / POINTERS

Children's Behavior Disturbances After Infectious Diseases

Appearance of personality alterations following common infectious diseases, especially measles and whooping cough and less so of chicken pox, scarlet fever and smallpox, is due to encephalitis. The nervous system involvement may occur in the course of a "light" or mild attack of the infectious disease, and may be unrecognized or may result in delirium, fever, stupor or coma, epileptiform seizures, headache, vomiting, rigid neck, respiratory irregularities, spasticity or flaccidity, increased spinal fluid pressure and increased cells in spinal fluid. —A. B. Baker, M.D. in (University of Minnesota Medical School, Minneapolis) in *Postgrad. Med.*, Jan. 1949.

Myocardial Infarction vs. Pulmonary Embolus

When myocardial infarction is suspected but cannot be proven definitely, suspect a pulmonary embolus. An embolus to the lung may cause pain suggesting coronary thrombosis. X-ray of the chest may show a wedge (pie) shaped lesion in the periphery of one of the lungs, or a hazy shadow or a elevation of the diaphragm on the affected side and small pleuritic effusion or no changes at all (infarction of the lung may not follow embolization). —J. W. Fischer, M.D. in *American Practitioner*, Mar. 1949.

Angina Pectoris and Hypoglycemia

An overdose of insulin may cause an anginal attack. Very rarely, anginal attacks form part of the syndrome of spontaneous hypoglycemia.—T. East and C. Bain, *Recent Advance in Cardiology*, Blakiston, Phila., 4th. ed., 1948.

Digestive Upset Due to Renal Disease

Often the sole manifestation of an obstructive renal syndrome may be a digestive upset (indigestion, flatulence, belching, nausea). Both the kidneys and the intestinal tract have a common nerve supply. Urinalysis may be normal. Many serious urologic lesions may be present even when urine examination discloses nothing abnormal. —Roy Henline, M.D. *South. Med. J.*, Apr. 1949.

Undiagnosed Rectal Symptoms

Unexplained high rectal pains, persistent coccygeal pains, pressure discomforts of rectal constipation, cancerophobia of the rectum, rectal urge or tenesmus of diarrhea, should be first studied organically (sigmoidoscope, colon x-ray) then considered for psychosomatic tendencies. —Emil Granet, M.D. in *Rev. Gastroent.*, July 1949.

Head Injury in the Child

The child whose head is bumped or otherwise injured should be carefully watched for: 1. A period of apparently normal behavior, 2. later development of stupor or coma or convulsions, fever, dilatation of one pupil, any of which indicate that an extradural brain hemorrhage is developing. Immediate neurosurgery is needed, with removal of the clot, if a 50 per cent death rate is to be avoided. — Barnes Woodhall M.D., in *Southern Med. J.*, Apr. 1949.

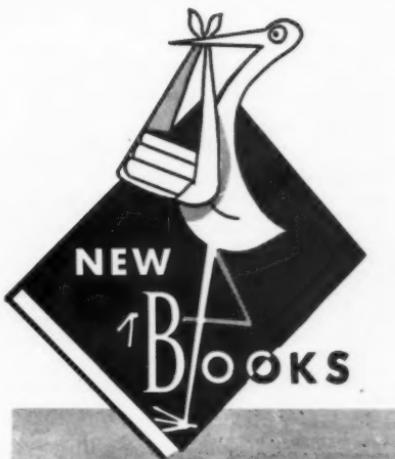
Inflamed Eyes: Iritis

If iritis appears, take a Wassermann test before using any form of therapy.

—Diagnosis of Syphilis, Venereal Disease Education Institute, Raleigh, N.C.

NEW BOOKS

Any book reviewed or listed in these columns will be procured for our readers if the order, addressed to CLINICAL MEDICINE, 1232-36 Central, Wilmette, Illinois, is accompanied by a check for the published price of the book.



Current Therapy 1950

Latest Approved Methods of Treatment for the Practicing Physician, Editor, Howard F. Conn, M.D. Consulting Editorial Board of M. Edward Davis, W. J. Kerr, Perrin Long, Walter Palmer, Hobart Reinmann, Cyrus C. Sturgis and others. Philadelphia: W. B. Saunders Company. 1950. \$10.00

Two hundred and sixty nine authors have contributed their exact technics of treatment. Each form of therapy is complete in itself, so that the volume may be used as a basis of therapy without long and difficult references to literature not often available on short notice.

Several methods of treatment are suggested, in some instances. This provides the reader with alternatives.

The medical libraries and physicians offices are flooded with abstracts of recent advances, often so brief as to be useless for the physician on the firing line. Here in one volume, present day treatment of the patient can be referred to and used immediately. The material is well paragraphed and time saving.

For New Mothers

By Mildred V. Hardcastle, R.N., John C. Winston Co., Publishers, Philadelphia, 1949. \$2.00

An ideal book for the physician to advise for his first mothers and even for those who have had a child or two. Common sense advice in laymen's language, it is "mothering without smothering." Each month is discussed separately so that the new mother can turn at once to the material that she needs.

Brain and Behaviour

By N.E. Ischiodsky, M.D. New York City. St. Louis: C.V. Mosby Co. 1949. \$7.00

The author feels that induction is a fundamental mechanism of neuro-psychic activity. This monograph presents a clinical and experimental study with relevant sociology, mental hygiene and educational aspects.

Atlas of Surgical Operations

By E. C. Cutler, M.D., Late Professor of Surgery, Harvard University and Robert M. Zollinger, M.D., Professor and Chairman, Department of Surgery, Ohio State University College of Medicine; Chief of Surgical Service, Ohio State University Hospital. Illustrated by Mildred Coddington. M.A. New York: The Macmillan Company. 1949. \$9.00

Ten years have passed since the first edition of this large volume appeared. It permitted the simultaneous appearance of multiple surgical illustrations on one large page and the related text notes on the opposite page.

The material is practical to the nth degree. Danger points are indicated, as of the superior thyroid artery retracting in thyroidectomy. Relevant anatomy is shown in preliminary views and during the course of the procedure. The newer technic using Cooper's ligament technique of repairing inguinal hernias is demonstrated well (your reviewer recently looked for this type of illustration in seven surgical texts, and did not find it). The location of Cooper's ligament at the operating table and on the cadaver are difficult to correlate, quite often).

Partial cholecystectomy, an occasionally valuable compromise between drainage and removal, is well illustrated and described.

The occasional surgeon and the expert surgeon will find this book invaluable.

Essentials of Orthopaedics

By Philip Wiles, M.S., F.R.C.S., F.A.C.S., Secretary, British Orthopaedic Association. Treasurer, Editorial Board, Journal of Bone and Joint Surgery. 1949. \$10.00

One of the best books now available for students and practitioners without previous training in orthopedics. The author constantly refers to the normal anatomy and function of each joint and part of the body, lists commonly used and accepted tests for back pain and other debated conditions, indicates and illustrates points of technic in making the diagnosis, and does not confuse the issue with elaborate surgical technics. Each region of the body is described in a separate section.

BOOK REVIEWS

Pain

By Harold G. Wolff, M.D., and Stewart Wolf, M.D. Professor of Neurology and Associate Professor of Medicine, Cornell University Medical School, New York City. Springfield, Illinois: Charles C. Thomas, Publisher, 1950. \$2.00.

Wolff's 1950 publication on pain brings up to date all the experimental work and clinical implications in this vital field.

What pain is, how to measure it, the fact that severely injured men often do not have severe pain, medical and surgical relief of pain, characteristics of pain, and pain arising from various body structures, all these topics are discussed briefly yet adequately. Every physician or surgeon must deal with pain. He would do well to read this slender volume, to reflect on his clinical experience, to understand pain better and to treat it more intelligently.

The Lexide, leather-like cover is a joy to use, permitting the book to be rolled into a pocket yet show no wear.—R.L.G.

Quinidine in Disorders of the Heart

By Harry Gold, M.D., Professor, Clinical Pharmacology, Cornell University Medical College, N.Y.C. Paul Hoeber, Harper & Brothers, 1950, \$2.00.

For the general practitioner as a source of reference to the uses of quinidine and the applicability of this unique medication to the individual patient. The drug is not being used for conditions in which it is of value because of fear, tradition, lack of knowledge of its effects and adherence to fixed dosages.

Discoveries for Medicine

By William H. Woglom, M.D., Yale University Press. New Haven, Conn. 1949. \$3.75.

Popular style of writing about men, not physicians, who made important medical advances. The discovery of the laryngeal mirror, measuring of blood pressure, respiration's physiology, the eustachian tube, the influence of heredity and other subjects are described vividly.

NEW MEDICAL PUBLICATIONS

TITLE Author	Publisher — Price	OF INTEREST TO	COMMENTS
INTRODUCTION TO CARBOHYDRATE BIOCHEMISTRY <i>By D. J. Bell</i>	University Tutorial Press Ltd.—\$1.50	Biochemistry Students	Summary of carbohydrate metabolism
CONTEMPORARY SCHOOLS OF PSYCHOLOGY <i>By R. S. Woodworth</i>	Ronald Press—\$3.00	Psychology Students	Goals of various schools of thought
HEMOSTATIC AGENTS <i>By W. H. Seegers</i>	Charles C. Thomas Pub.—\$4.50	Surgeons	Use of hemostatic materials
PHYSIOLOGY OF EXERCISE <i>By E. Morehouse and T. Miller, Jr.</i>	C. V. Mosby Co.—\$4.75	Physical Educators	Bodily functions
FOOD: THEIR VALUES AND MANAGEMENT <i>By H. C. Sherman</i>	University Press—\$3.25	Laymen	Scientific food values
MENTAL DISORDERS IN LATER LIFE <i>By O. J. Kaplan</i>	University Press—\$5.00	Physicians and Laity	The aging mind
UNITS IN PERSONAL HEALTH AND HUMAN RELATIONS <i>By the Educational Services of the Minn. Dept. of Health</i>	University of Minnesota Press—\$3.50	Grade School Teachers	Sex education for children and adolescents
THE DIGESTIVE TRACT IN ROENTGENOLOGY <i>By J. Buckstein</i>	J. B. Lippincott Co.—\$16.00	Roentgenologists	Illustrative work of alimentary canal
BRAIN AND INTELLIGENCE <i>By W. C. Halstead</i>	University of Chicago Press—\$6.00	Neurologists	Quantitative studies of frontal lobes
COMMON SKIN DISEASES <i>By A. C. Roxburgh</i>	Blakiston Co.—\$7.00	General Practitioners and Dermatologists	Diagnosis and treatment
SUCCESSFUL MARRIAGE <i>By M. Fishbein and E. T. W. Burgess</i>	Doubleday & Co.—\$6.00	All Physicians and Laity	Adult sex education
GLOMERULAR NEPHRITIS <i>By T. Addis</i>	The Macmillan Co.—\$8.00	Internists	Diagnosis and treatment
OXFORD LOOSE LEAF MEDICINE <i>By Various authors</i>		Subscribers to Oxford Loose Leaf Medicine	Supplements